

Our overall goal is to conduct research that promotes optimal management of and access to resource-intensive care for America's veterans, while containing overall health care costs. More specifically, our research priorities are to:

- Develop and evaluate systems to support practice management, quality monitoring, and quality improvement efforts; and
- Help optimize the provision of efficient, high quality care by investigating the outcomes of alternative treatments and the reasons for variations in practice and outcomes, both within and outside the VA system.

These inter-related research priorities both (a) capitalize on our nationally recognized strengths in the areas of clinical practice and quality monitoring, and (b) focus on important clinical and resource allocation questions that confront the VA health care delivery system. As indicated in our Strategic Plan for 2000-2004, and again in the Plan for 2004-2008, we can characterize our ongoing and planned research projects into the following four goals within our overall research priorities:

- (1) Improve our understanding of how to measure quality and improve resource use accountability for a patient population with substantial disease burden.
- (2) Examine alternative and innovative primary care-based approaches to improving quality and outcomes for serious, chronic illness.
- (3) Examine innovative approaches to improving access to and outcomes of high quality subspecialty and inpatient care.
- (4) Develop and apply improved methodologies for analyzing and understanding healthcare data.

Our multi-disciplinary team of investigators have expertise and interests that cross these four goals, which promotes collaboration and cohesiveness within the Center. Our overall goal is to make major impacts on our understanding of these issues and to improve the quality and efficiency of care provided to veterans with serious illness. Below we list ongoing and recently completed projects within each of these goals, then highlight the potential impacts of projects that were completed this past year and of selected projects recently published. Projects initiated this past year are marked with an *.

- (1) Improve our understanding of how to measure quality and improve resource use accountability for a patient population with substantial disease burden.
 - Utilization Patterns of Veterans with Major Psychoses (McCarthy; HSR&D LIP)
 - An Assessment of Veterans Who Are Hospice Eligible and Receive Acute Resuscitation in the Emergency Room (Duffy; HSR&D LIP)
 - Serious Mental Illness and Aging within the Veteran Population (Zeber, Copeland; HSR&D LIP)
 - Racial Disparities in Diabetes Care (Krein; HSR&D)
 - Quality Depression Care for Older Veterans: Tackling Treatment Issues (Kales; HSR&D ARCD)
 - Proactive Identification of Patients At-Risk for High Utilization: Using the MCDR Telephone Interview (Valenstein; University of Michigan)
 - Economic Impact of Guidelines for Gastroesophageal Reflux Disease (Inadomi; HSR&D)
 - The Impact of Adherence on the Cost-Effectiveness of Colorectal Cancer Screening (Inadomi; HSR&D LIP)
 - Identifying Cases and Costs of Dementia in the US (Langa; National Institute on Aging)
 - Health Services Needs of Aging Veterans with Schizophrenia (McCarthy; HSR&D MREP)*

* Projects initiated in FY 2004.

- (2) Examine alternative and innovative primary care-based approaches to improving quality and outcomes for serious, chronic illness.
- Improving Adherence with Antipsychotics Among Patients with Schizophrenia (Valenstein; HSR&D)
 - Improving Quality of Care for Persons with Multiple Chronic Illnesses (Kerr; HSR&D ARCD)
 - Coordinating Mental Health Services in Integrated Delivery Systems (Valenstein; HSR&D ARCD)
 - Optimizing Diabetes Care in the VA: Maximizing Quality and Minimizing Risk (Vijan; HSR&D ARCD)
 - Translating Research Into Action for Diabetes in the VA (TRIAD-VA) (Hayward, Kerr; HSR&D)
 - Translating Research Into Action for Diabetes in the VA (TRIAD-VA) – Phase 2 (Kerr, Hayward; HSR&D)*
 - An Evaluation of Home-Based Telemedicine Services (Hopp, Lowery; HSR&D)
 - Assessment of Site-Threatening Diabetic Retinopathy Status via Telemedicine (Lowery; HSR&D)
 - A Custom Approach to Implementation of Diabetes Hypertension Guidelines (Lowery; HSR&D)
 - Determinants of Treatment Retention for Veterans with Psychoses (Blow; HSR&D)
 - Tailored Alcohol Messages in the Emergency Department (Blow; NIAA)
 - Automated Assessments and the Quality of Diabetes Care (Piette; AHRQ)
 - Addressing Barriers to Translation for Treatment of Hypertension – Piloting of the Baseline Clinician Survey (Kerr; HSR&D LIP)
 - Opportunities and Barriers in Tele-Health (Hopp; HSR&D LIP)
 - Feasibility of a Step Count Feedback and Weight Loss Counseling Intervention (Richardson; HSR&D LIP)
 - Patient-Physician Discussions of Diabetes Self-Management in Routine Outpatient Visits (Heisler; HSR&D LIP)
 - Validity of Step Count Monitoring Devices (Richards; HSR&D LIP)
 - Pain Management Pilot Evaluation Study (Fletcher; HSR&D LIP)
 - The Epidemiology of Aspirin Use in Veterans at Increased Risk of Cardiovascular Events (Bernstein; Seattle ERIC)
 - Promoting Peer Support for Chronic Illness Care (Piette; VISN 11)*
 - Detecting Causes of Preventable Blindness in Diabetics (Bernstein; NIDDK)
 - An Evaluation of the Healthy Hair Starts with a Healthy Body Program (Krein; National Kidney Foundation of Michigan)
 - Screening and Brief Intervention for Patients Presenting to the Psychiatric Emergency Service with Major Mental Illnesses and At-Risk Drinking (Barry; E&J Flinn Family Foundation)
 - Addressing Barriers to Translation for Treatment of Hypertension (Kerr, Hofer; HSR&D)*
 - Evaluation of Primary Care Nurse Practitioners in VISN 11 (Fletcher; HSR&D)*
 - Services Interventions for Injured ED Problem Drinkers (Blow; NIAAA)*
 - Developing Violence Therapy for Substance Abusers (Chermack; NIDA)*
 - Promoting Peer Support for Diabetes Care (Heisler; NIDDK)*
 - Colon Polyp Screening with Colonoscopy for Women (Schoenfeld; NCI)
 - Colon Polyp Surveillance with DNA Analysis of Stool (Schoenfeld; NCI)
 - Services Interventions for Injured ED Substance Abusers (Blow; NIDA)*
 - An Evaluation of a Coordinated Proactive Diabetes Eye Care Program (Bernstein, Hayward; HSR&D Medical Care)*
 - Understanding and Strengthening Patient-Health Care Provider Partnerships to Enhance Patients' Chronic Disease Management (Heisler; HSR&D CDA)*

- (3) Examine innovative approaches to improving access to and outcomes of high quality subspecialty and inpatient care.
- Evaluation of a Nurse Case Management Model for Chronic Heart Failure (Starling, Lowery; HSR&D)
 - Acute Post-Operative Pain Management Using Massage as Adjuvant Therapy (Hinshaw, Mitchinson; HSR&D)
 - A Smoking, Alcohol, and Depression Intervention for Head and Neck Cancer (Duffy; HSR&D, SmithKline Beecham)
 - Health Care Providers' Perceptions of Spirituality as it Applies to Patient Care (Fletcher, Mitchinson; HSR&D LIP)
 - Translating Nosocomial Infection Research into Practice (Saint; HSR&D ARCD)
 - Targeting Interventions to Reduce Errors (Hofer; AHRQ)
 - SPORE in Head and Neck Cancer: Molecular Markers, Health Behavior, and Comorbidities as Predictors of Tumor Recurrence, Survival, and Quality of Life in Head and Neck Cancer (Duffy; NCI)
 - Shared Decision-Making in Early Breast Cancer Treatment (Wilkins, Lowery; University of Michigan)
 - Assessing Perceptions of End-of-Life Care in Advanced Heart Failure Patients (Hopp; HSR&D LIP)
 - Determinants and Outcomes of Surgical Treatment for Early Stage Breast Cancer: Is DCIS Different than Invasive Disease? (Katz; NCI)
 - Racial/Ethnic/Cultural Influences on End-of-Life Preferences (Duffy; Michigan Department of Public Health)
 - Evaluating Measures of Joint Replacement Outcomes (Smith; HSR&D MREP)
 - Planning a Nurse Case-Managed Inpatient Smoking Cessation Intervention (Duffy; HSR&D Medical Care)*
- (4) Develop and apply improved methodologies for analyzing and understanding healthcare data.
- Exploring Discrepancies between Patient and Public Utility Ratings (Ubel; DHHS)
 - Improving Value Measurement in Cost-Effectiveness Analysis to be Fair to the Elderly and People with Disabilities (Ubel; NIH)
 - Identifying and Reducing Cognitive Biases Created by Decision Aids (Ubel; AHRQ)
 - Assessing Evaluability and Outcome Presentation Mode Biases in Physician Decision-Making (Zikmund-Fisher; HSR&D LIP)
 - Estimating the Number of Preventable Adverse Events (Hofer; HSR&D LIP)
 - Estimating the Number of Preventable Deaths (Hayward; HSR&D LIP)
 - Veterans' Views of HIPAA, Privacy Protection and Health Services Research (Hayward; HSR&D)*

Over the past 4-5 years, more work at the Center has focused on decision-making and quality in the care of cancer. This work is very synergistic with our work in QI and medical decision-making in chronic medical conditions. In recognition of this area of research, VA investigator Steven Katz, MD, will be heading up a joint VA-UM program on health services research in cancer. In addition to established VA HSR&D investigators (Ubel, Fagerlin, and Underwood), one of our new investigators (Hawley) will be working in this important program.

Within the Ann Arbor COE there are four smaller centers focusing on diabetes (QUERI-DM), serious mental illness, health care decisions, and patient safety. A report on each of these centers/programs is provided below.

QUERI-DM

Since Spring 1998, the Ann Arbor HSR&D Center of Excellence has served as the Research Coordinating Center for the Quality Enhancement Research Initiative – Diabetes Mellitus (QUERI-DM). QUERI-DM is part of a VHA wide program to use research to improve the quality of patient care in ways that are measurable, rapid and sustainable. The overall goal of QUERI-DM is to reduce rates of preventable morbidity and mortality among veterans with diabetes. Within this overarching goal, we have identified several specific priority areas on which to focus. These priority areas include: 1) optimizing management of cardiovascular risk factors to prevent cardiovascular complications and mortality; 2) decreasing rates of other diabetes-related complications, with particular short-term emphasis on prevention of visual loss and lower-extremity ulcers and amputation; 3) improving patient self-management; and 4) better management of patients with diabetes and other chronic co-morbid conditions. In addition, QUERI-DM is actively engaged in work to advance clinically-meaningful quality and performance measurement both for directly promoting quality improvement and for assessing the results of quality improvement interventions.

While these priority areas serve as a focal point for QUERI-DM, the Research Coordinating Center also conducts a wide array of short term projects, assists investigators throughout VA by responding to requests for information and providing technical consultation on diabetes-related health services and epidemiological projects, and disseminates information on new research findings and innovative VA diabetes programs through the QUERI-DM newsletter and website (www.va.gov/annarbor-hsrd/QUERI-DMhome.html). Some of QUERI-DM's projects, project findings and translation related activities from the past year are highlighted below:

- 1) Completion of the TRIAD project, a collaboration between VA and CDC. Findings, reported above under "Completed Projects" and "Selected Published Studies," show that research translation efforts to improve the quality of diabetes care in the VA system have been successful.
- 2) In a QUERI-DM pilot study, "Assessing the Influence of Chronic Pain on Diabetes Quality of Care," we found that 60% of veterans with diabetes reported chronic pain, which was associated with poorer self-management and more difficulty with certain self-care activities. A VA study funded by end-of-year QUERI LIP funds is underway, and is using nationwide samples of patients and clinicians to further understand the presence and treatment of chronic pain among patients with diabetes. We are collecting data from patient and clinician surveys and medical records to determine care received as well as health outcomes.
- 3) QUERI-DM research on foot care among patients with diabetes has produced insights into the gaps and potential solutions for improving the care for those at high risk for amputation. A survey of veterans with diabetes and a high risk foot condition showed that about 50% fail to perform timely self-screening. A study of foot care and outcomes at VA sites found that coordination of care was associated with fewer amputations. Dr. Gayle Reiber, A QUERI-affiliated investigator at the Seattle HSR&D COE, is proposing a clinical trial to evaluate the implementation of specific interventions to enhance care for persons with diabetes and high-risk foot conditions.

National Serious Mental Illness Treatment Research and Evaluation Center (SMITREC)

SMITREC investigators include Frederic Blow, PhD (Director), Kristen Barry, PhD (Associate Director), Stephen Chermack, PhD, Helen Kales, MD (ARCDA 2004-2005), John McCarthy, PhD (MREP 2004-2007), and Marcia Valenstein, MD, MS (ARCDA 2002-2005). In addition to conducting a number of funded studies (described above and listed in Table of FY 2004 Funded Research Projects and Programs), SMITREC receives funds from VA Mental Health and Behavioral Science Service to carry out a number of projects, including several national patient registries, of system-wide interest to VHA. Some of these are described below.

Acting on the recommendation of The Committee on Care of Severely Chronically Mentally Ill Veterans (SCMI Committee), SMITREC developed the National Psychosis Registry (NPR) in 1998. The NPR is an ongoing registry of all VA patients diagnosed with serious mental illness who have received VHA services from 1988 to the present. SMITREC has published its fifth annual report based on the NPR, "Care for Veterans with Psychosis in the VHA: FY03." The report includes detailed FY03 information regarding the provision of case management and other specialized services, medical and psychiatric cost data, continuity of care measures, and the provision of appropriate antipsychotic medication. In addition, changes between FY99 and FY03 are presented. Significant findings include the continuing rise in the number of VHA patients with diagnoses of bipolar disorder and other psychoses, the concurrent decrease in the number of patients with diagnoses of schizophrenia, and the large drop in the amount of inpatient care provided to this population.

SMITREC has also developed the National Registry for Depression. The first annual report based on this registry was published this past year. It incorporates utilization, pharmacy, and cost data for more than 500,00 veterans diagnosed with depression in FY02, with a focus on the 305,122 patients treated in mental health specialty settings. Important findings include: the high rates of psychiatric and medical comorbidities among these patients and high rates of polypharmacy, including high rates of benzodiazepine use.

SMITREC also collaborated with the VA Office of Quality and Performance to develop a performance monitor, patterned on a HEDIS measure, that evaluates VA treatment of new episodes of depression. Registry data suggest that veterans with new depression often do not receive guideline-recommended visit frequency or antidepressant coverage (only 9% received 3 or more follow-up visits in the acute treatment phase, while 66% received adequate antidepressant coverage).

Work on the issue of mental health care in community-based outpatient clinics (CBOCs) continues, with the most recent report including FY03 data. Analyses found that for all mental health diagnoses, at least 23% of CBOCs nationally provided no specialty care in FY03. In addition only 7% of CBOCs nationwide provided at least 80% of their substance abuse patients with specialized MH care. Despite the increasing emphasis on provision of MH care in CBOCs, between FY98 and FY03 the percentage of MH patients receiving specialized care dropped for substance abuse, psychosis and other MH diagnoses.

Additional information on SMITREC can be found at their Web site: www.va.gov/annarbor-hsrd/smitrec.htm <<http://www.va.gov/annarbor-hsrd/smitrec.htm>>.

Program for Improving Health Care Decisions

The Program for Improving Health Care Decisions (PIHCD) is an interdisciplinary program jointly sponsored by the VA Center for Practice Management and Outcomes Research and the University of Michigan. It was established in 2000 by Peter Ubel (1998 ARCD), MD. The PIHCD mission is to understand and improve health care decision-making, from the bedside to the boardroom, including decisions made by patients, clinicians, and policy makers. Other PIHCD investigators include Angela Fagerlin (MREP 2005-2008), Dylan Smith (MREP 2004-2007), Brian Zikmund-Fisher, and Laura Damschroder. Findings from projects completed this past year are presented below.

As part of the NCI-funded study, "Determinants and Outcomes of Surgical Treatment for Early Stage Breast Cancer: Is DCIS Different than Invasive Disease" (Katz, PI), Dr. Fagerlin used a population based sample (SEER) to evaluate what women recently diagnosed with breast cancer know about breast cancer treatment. Specifically she found that many women misunderstand the likelihood of recurrence, and that this misconception is most prevalent in women with low education.

As part of the AHRQ funded study, "Identifying and Reducing Cognitive Biases Created by Decision Aids" (Ubel, PI), Dr. Fagerlin, along with other Ann Arbor HSRD colleagues, has developed the Subjective Numeracy Scale, which allows the measurement of subjects' numerical ability in a relatively unthreatening manner. Numerical ability is likely to affect people's ability to provide informed consent. For example, they have shown that numeracy is related to people's interpretation of data provided in a survival curve. Thus, developing a quick, non-threatening scale to measure these skills will have an important impact for studies measuring risk communication and medical decision making.

As part of the NICHD grant, "Exploring Discrepancies Between Patient and Public Utility Ratings" (Ubel, PI), Drs. Smith and Ubel are exploring the phenomenon where people with disabilities and serious illnesses often report that their quality of life is considerably higher than healthy people think it would be. They have replicated this finding using Palm Pilots in a case-control study. The results suggest that patients (and their doctors) may not have a good understanding of the impact that certain procedures will have on their life experience, and this could prevent them from making decisions that produce optimal outcomes. In terms of health policy, this discrepancy may lead decision-makers to allocate funds to treatments of diseases that are less severe than intuition may suggest rather than where funds could have the most impact.

As part of the NIH grant, "Improving Value Measurement in Cost-Effectiveness Analysis to be Fair to the Elderly and People with Disabilities" (Ubel, PI), Ms. Damschroder and Dr. Ubel are validating the person tradeoff (PTO) utility measure that is thought to incorporate the value people place on distributive fairness and equity. Results have shown that perspective plays a major role in people's willingness to make the difficult rationing choices posed by the PTO. People are more likely to make difficult tradeoffs in a resource allocation task when they are acting as a personally responsible decision maker than when they are simply evaluating someone else's decisions or rating the benefit derived from different treatment programs. In addition, they have found that when people are asked to first consider their own ability to adapt to difficult situations, it changes the values people place on disabilities.

Additional information on PIHCD can be found at their Web site: www.pihcd.org.

VA/UM Patient Safety Program

Tim Hofer, MD, and Sanjay Saint, MD, direct the VA/UM Patient Safety Program, which was established with funds from AHRQ in 2001. The overall goal of the Program is to assemble interdisciplinary teams of investigators to conduct creative, high-impact research in the following areas: (1) preventing hospital and nursing home adverse events; (2) enhancing patient safety in ambulatory care; (3) improving medical decision-making by physicians and patients as an error reduction strategy; and (4) improving our understanding of the reliability and validity of error assessment. As part of the effort to develop more investigators in this area, the Program's senior investigators participate in the mentoring of several young clinician investigators (at the fellow or junior faculty positions), including VA investigators, in patient safety related projects.

Activities sponsored by the VA/UM Patient Safety Program include a number of ongoing field experiments in techniques for minimizing nosocomial infections in the hospital, use of the Nursing Home Minimum Data Set in conjunction with merged Medicare files to look at risks for nosocomial infections, and an observational study examining communication in ICUs using the techniques of cognitive task analysis.

A number of important findings have already emerged from Program-related research undertaken in real-world hospital settings. For example, we now know that we can reduce the incidence of urinary tract infection in hospitals by substituting external (condom) catheters for indwelling urethral catheters, especially for patients who are not cognitively impaired (research that focused on men residing in a VA medical center). We have found that catheter use can be decreased simply by reminding physicians that their patients have been catheterized and asking them to

explain why continued catheterization is warranted. We have found that antiseptic-coated central venous catheters appear to reduce catheter-related bloodstream infection. Finally, we also know several risk factors for urinary tract-related bacteremia in those with nosocomial bacteriuria (research on patients residing in a VA medical center). Because most findings related to patient safety derive from carefully controlled settings and not real-world ones, their generalizability is always suspect. We are very excited that our findings are plausible given the clinical literature and emerge from the types of health care settings that patients really use.

Completed projects (FY 2004)

A Smoking, Alcohol, and Depression Intervention for Head and Neck Cancer (Duffy; HSR&D IIR #98-500)

This study examined the impact of a multi-modal intervention targeting three inter-related factors (smoking, alcohol consumption, and depression) in veterans with head and neck cancer. The nurse-administered intervention included the use of medications and cognitive behavioral therapy. Preliminary results find that patients receiving this intervention scored higher on mental health quality of life measures and quit smoking at a significantly higher rate than patients receiving treatment-as-usual.

Economic Impact of Guidelines for Gastroesophageal Reflux Disease (Inadomi; HSR&D IIR #99-238)

This project comprised two studies that evaluated the effectiveness of VA guideline-concordant strategies intended to effectively manage GERD while reducing cost and resource utilization. One study examined the impact of step-down management (in which GERD patients are treated initially with proton pump inhibitors and then moved onto less expensive medication), and the other intermittent therapy (in which patients receive medication only for recurrence of GERD symptoms). Initial results suggest that in spite of VA guidelines supporting step-down management and FDA approval of over-the-counter medications for intermittent therapy, continuous treatment is significantly more effective than either of these alternative approaches in treating GERD symptoms.

Translating Research into Action for Diabetes in the VA (TRIAD-VA) (Kerr; HSR&D SDR #01-019)

TRIAD-VA is a collaborative project conducted in conjunction with the Centers for Disease Control and Prevention, making it possible to compare diabetes care in VHA and in commercial, managed care organizations. Although VA patients tended to be older and had lower incomes than managed care patients, they had better scores on all process measures, such as annual A1c and aspirin use counseling, better LDL and glycemic control, and equivalent blood pressure management and patient satisfaction. These findings suggest that a federally sponsored national healthcare organization can provide care that is equivalent to or better than that provided by commercial, managed care plans.

An Evaluation of Home-Based Telemedicine Services (Hopp; HSR&D TEL #20-015)

This randomized control trial compared a home-based tele-health system (intervention group) with usual home care services (control group). The intervention group demonstrated greater improvement in mental health scores, a trend toward fewer outpatient visits, and a higher number of home health contacts. Differences in physical health status, emergency room visits, inpatient admissions and stays, and 6-month changes in satisfaction were not significant. Members of the intervention group reported a high rate of satisfaction with the telemedicine equipment that was installed in their homes. The results suggest that home-based tele-health services could increase patient access to home care services and improve the mental health status of patients receiving home-care services.

Racial/Ethnic/Cultural Influences in End-of-Life Preferences (Duffy; MI Dept of Public Health)

This project used focus groups and surveys to gather data about how men and women from several ethnic/cultural groups (Muslim and Christian Arabs, African Americans, Caucasians, and Hispanic/Latinos) view end-of-life issues such as assisted suicide, extending life, and nursing home placement. Findings showed that Arab groups tended to be against assisted suicide and nursing home placement; Hispanic and Black women were also against assisted suicide, though their male counterparts favored it; Blacks were least opposed to nursing home placement when necessary; and Whites felt it was most important to have choices. This study will help to inform more culturally sensitive handling of these issues with patients and their families in a population that is both aging and increasingly diverse.

Assessing Evaluability and Outcome Presentation Mode Biases in Physician Decision-Making (Zikmund-Fisher; LIP #41-105)

This randomized survey project collected data from a national sample of 242 physicians who were asked to make clinical judgments about hypothetical referral scenarios. Analyses explored the effect of evaluability bias (when one's preferences are inconsistent because of a lack of comparison for hard-to-evaluate situations) and perspective bias (when one chooses differently for others than for oneself) on physician decision-making. Results found that physicians were influenced by both of these biases. Insights gained from this study will help to raise awareness of factors biasing physicians' clinical decision-making, and contribute to improved decision-making in the future.

Planning a Nurse Case-Managed Inpatient Smoking Cessation Intervention (Duffy; HSR&D IMV #04-058)

This project surveyed veteran inpatient smokers and staff caregivers in order to determine what types of smoking cessation interventions would work best in this setting. Among the findings, 70% of patients were thinking of quitting smoking in the next 30 days, but only 17% reported receiving smoking cessation services while in the hospital. Depression and hazardous drinking were found to be co-occurring problems for these patients; and stress, boredom, and combat exposure were among the factors contributing to continuation of smoking. Most staff felt that VA should do more to assist patients in smoking cessation, though less than half reported providing smoking cessation services to patients in their care. Lack of confidence and training were the primary inhibitors for providing these services. These results suggest that the VA could be doing more to provide smoking cessation services to inpatient veterans, including preparation of inpatient staff to work with patients on this issue.

Determinants of VA Treatment Retention Among VA Patients with Serious Mental Illness (Blow; HSR&D TXI #01-014)

The objective of this project was to identify and assess patterns of VA mental and physical health care and medication utilization in relationship to treatment retention among veterans with psychoses. Other aims included identifying modifiable factors associated with treatment retention, as well as predictors of mortality among those who were and were not lost to treatment in this vulnerable patient population. Initial results revealed that 6.2% of patients diagnosed with schizophrenia or bipolar disorder in FY 1998 had a 12-month gap in VA care. Patients who were younger, black, Hispanic, male, Native American, had a diagnosis of bipolar disorder, or lived further from a VAMC were more likely to experience a gap in care. Patients with greater medical morbidity were less likely to have a gap.

Assessment of Sight-Threatening Diabetic Retinopathy Status via Telemedicine (Lowery; HSR&D TEL #99-242)

The objective of this study was to evaluate the accuracy of using digital fundus photographs for diagnosing diabetic retinopathy. Findings showed only fair agreement between slides and digital photos evaluated by a trained grader, and poor agreement between slides (evaluated by the trained grader) and digital photos evaluated by ophthalmology fellows. VA is expending considerable sums of money to implement telemedicine initiatives, including screening for retinopathy. These findings suggest that implementation of such initiatives should take place with a clear understanding of potential limitations.

Patient-Physician Discussions of Diabetes Self-Management in Routine Outpatient Visits (Heisler; LIP #41-103)

Because patient knowledge of target disease outcomes is hypothesized to be a significant factor in patients' management of chronic disease, this study surveyed 840 adults with type 2 diabetes in order to assess knowledge of most recent A1C value and to determine correlates of this knowledge. Only 25% of respondents accurately reported their most recent A1C value. A1C knowledge correlated with education level, strong agreement that providers thoroughly answered questions, and reported understanding of one's diabetes care. It was not associated with reported self-efficacy in managing diabetes. These findings contribute to understanding of factors influencing effective involvement of patients in managing chronic conditions such as diabetes.

Estimating the Number of Preventable Deaths (Hayward; LIP #41-109)

This project conducted a comprehensive review of research that has evaluated the incidence and nature of preventable major adverse events in hospital treatment in order to address claims that up to 100,000 patients per year die as a result of medical errors. Analysis of this literature found that although trained physician reviewers in these studies judged a substantial portion of inpatients deaths to be "possibly" or "probably" preventable, none of the studies in question adequately accounted for over-estimation caused by skew and low reliability. This suggests that there is a need for better approaches to assessment of the impact of quality and patient safety problems.

Estimating the Number of Preventable Adverse Events (Hofer; LIP #41-108)

This study of measurement error in statistical analysis looked at simulations to determine how accounting for measurement error would have influenced statistical estimates of the impact of medical errors in previous research. Results showed that estimates of preventable events in almost all previous studies relied upon methods with low to moderate reliability. Findings from this project will be used to explain how to identify and correct for measurement errors when estimating the number of cases in a particular category in order to improve the methods used for assessing the frequency of quality and patient safety problems.

Findings from selected published studies (FY 2004)

Enough: The Failure of the Living Will (Fagerlin; HSR&D COE HFP #83-014)

This thought-provoking essay explores the philosophical, legal, and medical underpinnings of the policies that promote advanced directives and living wills, the economic impact of implementation of these policies, and the efficacy of these efforts in achieving their stated aims. The authors argue that while costs associated with the Patient Self-Determination Act have soared into the millions, living wills have consistently failed due to psychological and social-organizational factors that impact their practical implementation. Fagerlin A, Schneider CE. *Hastings Center Report* 2004; 34(2): 30-42.

Diabetes care quality in the Veterans Affairs Health Care System and commercial managed care: the TRIAD study (Kerr; HSR&D SDR #01-019)

This study demonstrated that VA patients with diabetes receive care better than or equal to that delivered by commercial managed care systems. 1285 VA patients and 6920 managed care patients were compared on eight standard tests or services recommended for patients with diabetes, with VA patients proving more likely to receive these. Results suggest that a nationally funded health care system can deliver excellent quality of care. Kerr EA, Gerzoff RB, Krein SL, Selby JV, Piette JD, Curb JD, et al. *Annals of Internal Medicine* 2004; 141:272-281.

Cost-related medication under-use: do patients with chronic illnesses tell their doctors? (Piette and Heisler; HSR&D COE HFP #83-014)

This study found that two thirds of 660 chronically ill patients who had cut back on medications because they couldn't afford to pay for them did not tell their doctors they had done so, even though missing necessary medication was potentially harmful. On the other hand, patients who

did discuss this issue with their health care providers generally received help in the form of free medication samples, drug assistance programs, or prescriptions for less costly generics. These findings underscore the necessity for physicians to raise the subject of expense and medication adherence with their patients. Piette JD, Heisler M, Wagner TH *Archives of Internal Medicine* 2004; 164:1749-1755.

Racial/ethnic disparities in the treatment of localized/regional prostate cancer (Underwood; HSR&D COE HFP #83-014)

Review of records for more than 140,000 men with prostate cancer found that black and latino men were less likely than white men to receive surgery or radiation, and that this disparity widened as cancer became more aggressive. The results highlight the importance of access to care, which may play a greater role than previously assumed in the survival gap between black and white men with prostate cancer. Underwood W, DeMonner S, Ubel P, Fagerlin A, Sanda MG, Wei JT. *Journal of Urology* 2004; 171:1504-1507.

Problems paying out-of-pocket medication costs among older adults with diabetes (Piette; DII #99-187)

This study found that 11 percent of diabetes patients surveyed reported cutting back on diabetes-related medications for financial reasons. Skipping doses or taking inadequate doses compromises glycemic control and increases patients' risks of developing more severe medical problems. Results point to the importance of communication between health care providers and patients regarding medication expenses and adherence. Piette JD, Heisler M, Wagner TH. *Diabetes Care* 2004; 27:384-391.

Extent and cost of informal caregiving for older Americans with symptoms of depression (Langa, Valenstein, Vijan; #1 K08 AG19180-01)

This study used data from the 1993 Asset and Health Dynamics Among the Oldest Old Study to obtain nationally representative estimates of the additional time and cost associated with informal caregiving for older Americans with depressive symptoms. In multivariate regression analyses that adjusted for sociodemographics, caregiver network, and coexisting chronic health conditions, respondents with no depressive symptoms received an average of 2.9 hours per week of informal care, compared with 4.3 hours per week for those with one to three symptoms and 6.0 hours per week for those with four to eight symptoms. Caregiving associated with depressive symptoms in elderly Americans represented a yearly cost of about \$9 billion. Langa KM, Valenstein MA, Fendrick AM, Kabeto MU, Vijan S. *American Journal of Psychiatry* 2004; 161:857-863).

Quality Indicators and Monitoring of Mental Health Services: What Do Frontline Providers Think? (Valenstein, Mitchinson, Alexander, Duffy; HSR&D IIR #98-102)

Frontline mental health care providers in VHA were surveyed to elicit their perceptions of widely used indicators for quality monitoring in mental health services. Most mental health care providers (65%) felt that feedback about these widely used indicators would be valuable in efforts to improve care; however, only 38% felt able to influence performance related to these monitors and just 13% were willing to accept incentives/risk for their performance. Providers were most positive about satisfaction monitors and preferentially included satisfaction, access, and process monitors in performance sets to measure overall quality. Despite providers' relatively positive views of monitors, 41% felt that monitoring programs did not assist them in improving care. Valenstein M, Mitchinson A, Ronis DL, Alexander JA, Duffy SA, Craig TJ, et al. *American Journal of Psychiatry* 2004; 161:146-153.

Poor Antipsychotic Adherence Among Patients With Schizophrenia: Medication and Patient Factors (Valenstein; HSR&D RCD #98-350/XVA #41-001)

Investigators examined VA pharmacy data in order to learn whether patients receiving atypical antipsychotic medications were more or less adherent to medication regimens, and what factors contributed to poor adherence. 40% of patients taking one antipsychotic medication were identified as poorly adherent. African American patients, younger patients, and those taking an atypical antipsychotic medication were more likely to be poorly adherent. These results suggest

that although atypical antipsychotic medications might be more acceptable to patients, they do not seem to improve medication adherence. Valenstein M, Blow FC, Copeland LA, McCarthy JF, Zeber JE, Gillon L, Bingham CR, Stavenger T. *Schizophrenia Bulletin* 2004; 30(2):255-64.

Benzodiazepine Use Among Depressed Patients Treated in Mental Health Settings (Valenstein; HSR&D RCD #98-350/RCD #00-037)

Drawing on data from the VA National Registry for Depression and VA pharmacy data, this study examined benzodiazepine use among elderly veterans and found that depressed patients treated in mental health settings were commonly prescribed long term treatment with benzodiazepines combined with anti-depressants. This pattern of use is inconsistent with current treatment guidelines, which recommend minimizing benzodiazepine use in the treatment of depression especially in elderly patients. Valenstein M, Taylor KK, Austin K, Kales HC, McCarthy JF, Blow FC. *American Journal of Psychiatry* 2004; 161(4): 654-61 2004.

Use of Alcohol Screening and Brief Interventions in Primary Care Settings: Implementation and Barriers (Barry, Blow; SUI #99-113)

Findings from this study showed that 85% of patients treated in VHA primary care settings received some screening for alcohol use disorders. The CAGE was the predominant screening tool. The primary clinical focus was on treatment referrals for patients who met abuse/dependence criteria. Lack of time was the most important perceived barrier to implementing screening and brief alcohol interventions for at-risk and problem drinkers. Barry KL, Blow FC, Willenbring ML, McCormick R, Brockmann LM, Visnic S. *Substance Abuse* 2004; 25(1):27-36.